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# SHARP 21LF-90RU SERVICE MANUAL

## Quick Links

Controls & Terminals

## Table of Contents

Table of Contents
service manual
sharp corporation
ELECTRICAL SPECIFICATIONS
IMPORTANT SERVICING NOTES
remote control
CONTROLS & TERMINALS
PRINTED WIRING BOARD LAYOUT
replacement parts
PARTS LISTING
HOW TO UPDATE THE TECHNICAL INFORMATION
Other ManualsLib Projects

SHARP

# SERVICE MANUAL

SE0021LF90R00
Issued:22nd April 2005

## AK-44 CHASSIS

PAL B/G / SECAM L/L', B/G, D/K SYSTEM COLOUR TELEVISION

# MODEL 21LF-90RU

In the interests of user safety (required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

In order to service the model 21LF-90RU, refer to the AK-44 Chassis Service Manual (SE00AK44CHA00).

CONTENTS

ELECTRICAL SPECIFICATIONS ..... 3
IMPORTANT SERVICING NOTES ..... 4
CONTROLS & TERMINALS ..... 5
PRINTED WIRING BOARD LAYOUT ..... 6
PARTS LISTING ..... 7
HOW TO UPDATE THE TECHNICAL INFORMATION ..... 11

SHARP CORPORATION

This document has been published to be used for after sales service only.

## SERVICE MANUAL UPDATE LOG SHEET

| Technical Report No.<br>Technical Bulletin No. | Cause / Solution | Part No. | Page No. | Application<br>Data /Serial No. |
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Use this page to keep any special servicing information as Technical Report (Bulletin), Technical Information, etc.
If only part number changes are required, just change part number directly the part number in the Parts Listing Section.
If you need more information, please refer to the Technical Report (Bulletin).

# ELECTRICAL SPECIFICATIONS

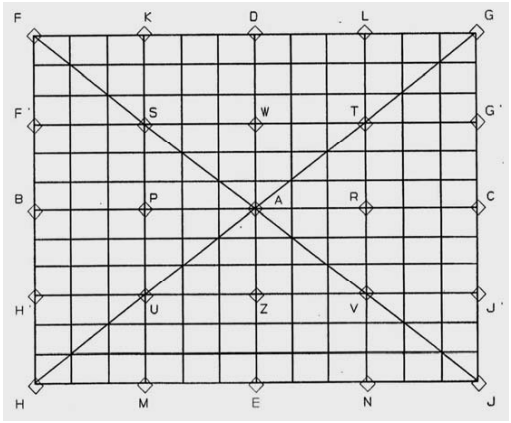
•Power Input ..... 220V-240 Volts AC 50 Hz

•Power Consumption
Normal Operation (Method IEC60107) ..... 62 W
Stand-by Operation ..... < 3 W

•Audio Power Output Rating (MPO) / Impedance
Internal Left Speaker ..... 4 W, 16 Ω
Internal Right Speaker ..... 4 W, 16 Ω

•Speakers
Speaker elliptic (2 pcs) ..... 50 x 120 mm

•Convergence (Maximum Misconvergence)




| AREA | mm |
|---|---|
| A | 0.3 |
| BC | 1.0 |
| DE | 1.0 |
| FGHJ | 1.3 |
| KLMN | 1.2 |
| F'G'H'J' | 1.2 |
| STUV | 1.1 |

•Picture Intermediate frequency
L' ..... 33.9MHz
L, B/G, D/K ..... 38.9MHz

•Sound Carrier Trap
L' ..... 40.4MHz
L, D/K ..... 32.4MHz
B/G ..... 33.4MHz

•Adjacent Sound Carrier Trap
L' ..... 32.4MHz
L, D/K, B/G ..... 40.4MHz

•Adjacent Picture Carrier Trap
L' ..... 41.9MHz
L, D/K ..... 30.9MHz
B/G ..... 31.9MHz

•Aerial Input Impedance
VHF/UHF ..... 75 ohm Unbalanced

•Tuning Ranges ..... 48.25MHz thru 855.25 MHz
VHF: S1 - S41 CH (Hyperband)
E2 - E12 / F2 - F10
UHF: E21 - E69

•White Level
Apply the rated voltage at the rated frequency to the TV set, while it is receiving full white pattern RF signal of 60 dB/μV from its RF input via the pattern generator.
Turn all picture controls to maximum value. Measure the colour temperatures at the center of the screen by using the colour analyzer.

**X=0.304 ± 0.015 Y=0.306 ± 0.015**

Specifications are subject to change without prior notice.

**WARNING**

The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis.
To prevent electric shock, do not remove cover. No user-serviceable parts inside. Refer servicing to qualified service personnel.

# IMPORTANT SERVICING NOTES

Only qualified service personnel are allowed to carry out maintenance and repair of this receiver.

## Servicing of High Voltage System and CRT

It is important that the static charge is removed from the high voltage system when carrying out work on the receiver. This can be achieved by connecting a 10K resistor (with a suitably insulated lead) from the CRT cavity connector to the CRT ground tag. This must be carried out with the AC supply disconnected from the receiver.

Note the following:

- The CRT in this receiver employs Integral Implosion Protection.
- If the CRT has to be changed it MUST be replaced with the correct type for continued safe working.
- DO NOT lift the CRT by its neck.
- When handing the CRT, ensure that shatterproof goggles are worn.
- Ensure that the CRT is discharge before handling.

## X-Ray

This receiver is designed to keep any x-ray emission to an absolute minimum. Some fault conditions and servicing procedures may produce potentially hazardous x-ray radiation levels. This is a problem when in close proximity to the receiver for long periods of time. To reduce any risks associated with this, please observe the following precautions:

1. When undertaking any servicing on this chassis, DO NOT increase the EHT to more than 30.0 KV, (at a instantaneous beam current of 1300 μA).

2. Ensure that during normal operation the EHT does not exceed 25.55 KV (at a beam current of 1000 μA). This level has been preset in the factory. Always check that this level has not been exceeded after carrying out any repair on the receiver.

3. DO NOT replace the CRT with any other type than that specified in the parts listing as this may cause excessive x-ray radiation.

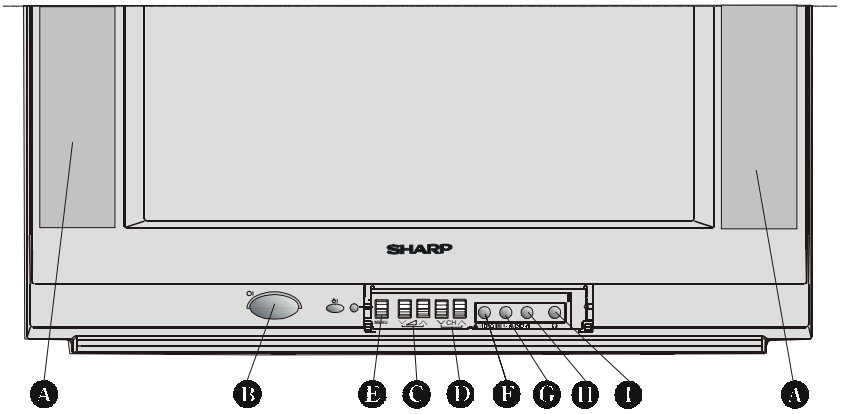
## Before returning the receiver to the customer

In addition to the above checks, the following should also be carried out before returning the receiver to the customer.

1. Inspect all the leads to ensure that they are dressed correctly and that they are not obstructed or pinched by any other parts.

2. Ensure that all protective devices are in good condition. These will include nonmetallic control knobs, insulating fish papers, cabinets backs, compartment covers or shields, mechanical insulators, etc.

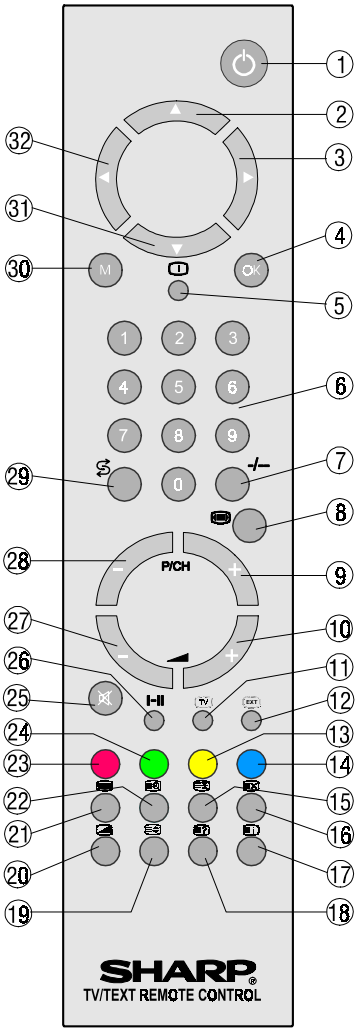
# CONTROLS & TERMINALS




- A Speakers (left + right)
- B ⏻ = Power On / Off
- C ∨ 🔊 ∧ = Volume -/+
- D ∨ **CH** ∧ = Program -/+
- E **MENU** = Menu
- F **VIDEO** = VCR
- G **AUDIO L** = Audio left
- H **AUDIO R** = Audio right
- I 🎧 = Headphone 3,6 mm Ø

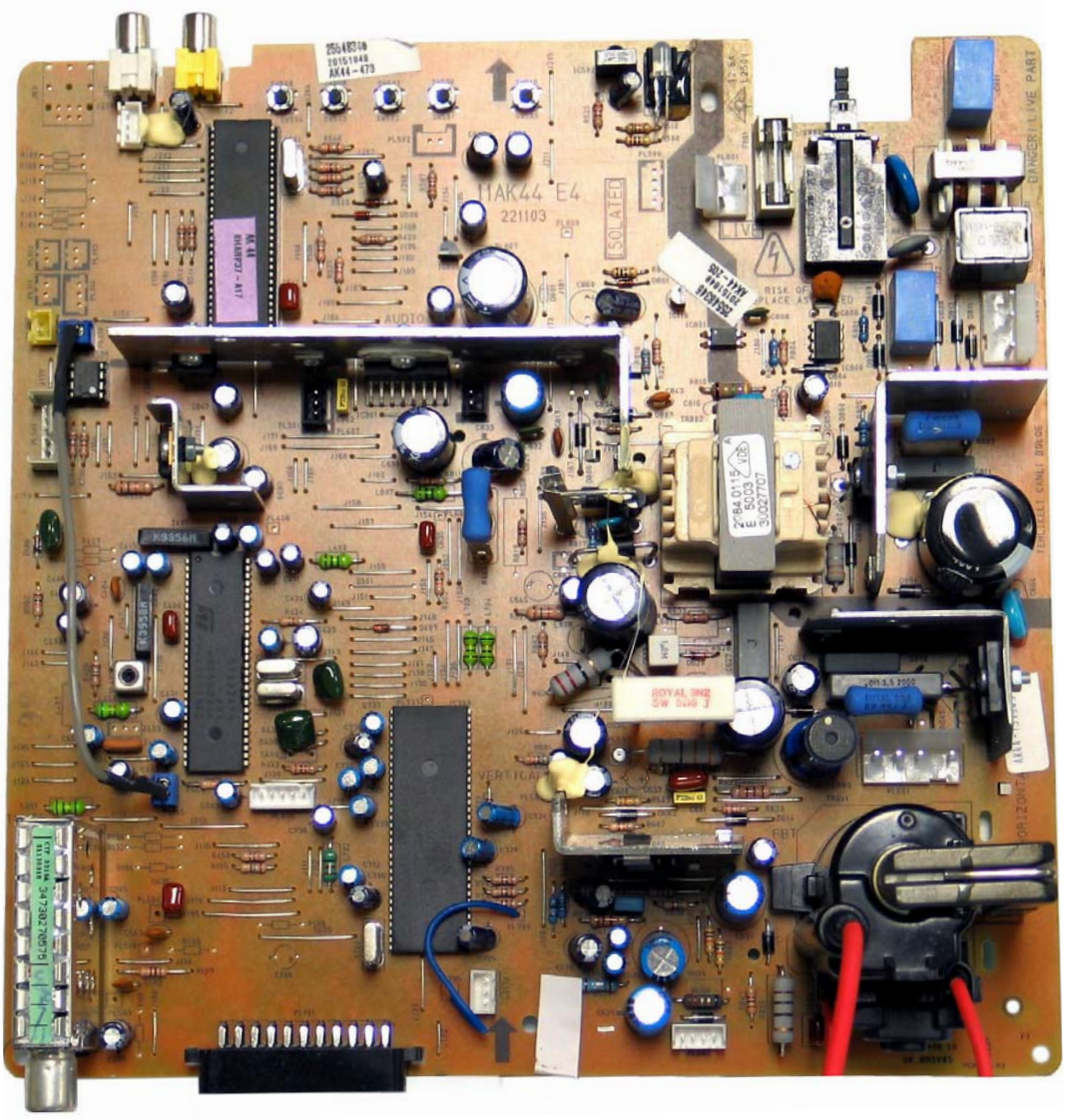
# REMOTE CONTROL

1. ⏻ = Stand By
2. △ = Cursor Up
3. ▷ = Cursor Right
4. OK = OK
5. i = Info (Program Menu)
6. **0 - 9** = Direct Program
7. **-/--** = Double Digit
8. = Wide mode button
9. **P/CH+** = Program +
10. **+** = Volume +
11. TV = TV / Quit Menu
12. EXT = EXT button (**SCART, F- AV, RGB**)
13. **Yellow** = Feature Menu
14. **Blue** = Installation Menu
15. = Hold
16. = Update
17. = Index Page
18. = Reveal
19. = Expand
20. = Mix
21. = Teletext
22. = Time
23. **Red** = Sound Menu
24. **Green** = Picture Menu
25. = Mute
26. **I-II** = Mono/Stereo - Dual I-II
27. **-** = - Volume
28. **- P/CH** = -Program
29. = Flash back button
30. **M** = Menu
31. ▽ = Cursor Down
32. ◁ = Cursor Left

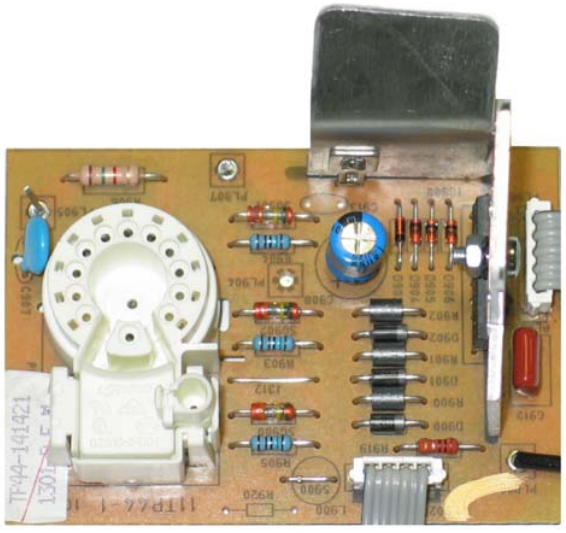


# CHASSIS LAYOUT

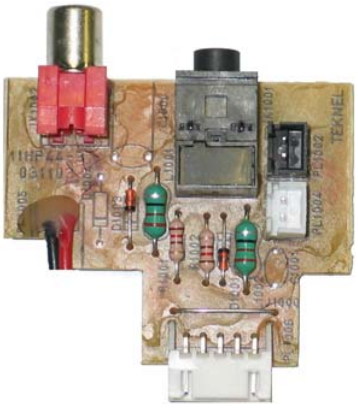
## Mother Unit



## CRT Unit



## Headphone Unit



# PARTS LISTING

## REPLACEMENT PARTS

Replacement parts which have special safety characteristics are identified in this manual. Electrical components having such features are identified by in the Replacement Parts Listing.
The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended is not permitted.
Replacement parts not shown in this service manual may create shock fire, or other hazards.

## HOW TO ORDER REPLACEMENT PARTS

To have your order completed promptly and correctly please supply the following information.

1. MODEL NUMBER
2. REF. NO.
3. PART NO. (*)
4. DESCRIPTION
5. CODE
6. QUANTITY

**(*) When ordering any part, a "V" should be added before the Part No.**

| | REF No. | (*) PARTS | DESCRIPTION | SN CODE | EX CODE |
|---|---|---|---|---|---|
| | | | **PICTURE TUBE** | | |
| ⚠ | | 30017634 | 21" CRT TUBE SAFE EW FREE REALFLA | BW | CQ |
| ⚠ | | 30028644 | 21DEGCOIL&EARTH SAFE CB.WO/UL FLAT SHARP | AG | AR |
| | | | **TUNER** | | |
| | TU201 | 30009637 | TUNER WSP (PLL) CTF5510A | AR | BC |
| | | | **INTEGRATED CIRCUITS** | | |
| | IC101 | 30018063 | IC HT48RA0A OTP | AF | AR |
| | IC118 | 30001506 | IC TL431 | AC | AH |
| | IC301 | 30011824 | IC TDA7266 ROHS | AF | AR |
| | IC403 | 30026922 | IC STV2248H (SHRINK56) ROHS | AR | BC |
| | IC500 | 20187664 | IC 24C08 U0142511031012 1201 | AB | AF |
| | IC501 | 20170086 | PR.IC.36/44-SHARP 36_44_B31 | AS | BD |
| | IC502 | 30001669 | PREAMPLIFIER TFMS1380 | AD | AM |
| | IC600 | 30015306 | IC TDA8174AW | AD | AN |
| | IC700 | 30013658 | IC MSP3410G SDIP64 ROHS | AS | BD |
| | IC800 | 30011968 | IC SMPS MC44608 DIP8 | AF | AQ |
| ⚠ | IC801 | 30015087 | IC SAFE OPTOCOUPLER TCET1102G | AA | AE |
| | IC803 | 30001500 | IC LM7808. | AC | AH |
| | IC804 | 30001622 | IC 7805 (1A) | AB | AF |
| | IC806 | 30014346 | IC 78L05 TO-92 (100mA) | AA | AE |
| | IC900 | 30025172 | IC TDA6107JF/N3 ROHS | AF | AQ |
| | | | **TRANSISTORS** | | |
| | Q100 | 30001453 | TR BC337 | AA | AC |
| | Q104 | 30001457 | TR BC848B SMD | AA | AC |
| | Q301 | 30001458 | TR BC858B SMD | AA | AB |
| | Q302 | 30001457 | TR BC848B SMD | AA | AC |
| | Q402 | 30001457 | TR BC848B SMD | AA | AC |
| | Q405 | 30001457 | TR BC848B SMD | AA | AC |
| | Q406 | 30001457 | TR BC848B SMD | AA | AC |
| | Q503 | 30001457 | TR BC848B SMD | AA | AC |
| | Q504 | 30001458 | TR BC858B SMD | AA | AB |
| | Q505 | 30001457 | TR BC848B SMD | AA | AC |
| | Q601 | 30013656 | TR POWER STX112-AP | AA | AE |
| | Q603 | 30001448 | TR BU808DFI ROHS | AF | AQ |
| | Q604 | 30001457 | TR BC848B SMD | AA | AC |
| | Q606 | 30001457 | TR BC848B SMD | AA | AC |
| | Q607 | 30001458 | TR BC858B SMD | AA | AB |
| | Q700 | 30001458 | TR BC858B SMD | AA | AB |
| | Q801 | 30001386 | TR MTP6N60E (PLASTİK) | AE | AP |
| | Q802 | 30001457 | TR BC848B SMD | AA | AC |
| | Q804 | 30001454 | TR BC548B | AA | AC |
| | | | **DIODES** | | |
| | D100 | 30002733 | LED INFRARED IR333 | AA | AC |
| | D1001 | 30003722 | DIODE ZENER ZPD15V | AA | AA |
| | D1003 | 30003722 | DIODE ZENER ZPD15V | AA | AA |
| | D101 | 30025773 | DIODE ZENER SMD BZT55B5V1 | AA | AA |
| | D102 | 30025773 | DIODE ZENER SMD BZT55B5V2 | AA | AA |
| | D103 | 30025773 | DIODE ZENER SMD BZT55B5V3 | AA | AA |
| | D104 | 30009699 | DIODE ZENER BZT55C12 12V SMD | AA | AB |
| | D105 | 30025773 | DIODE ZENER SMD BZT55B5V4 | AA | AA |
| | D106 | 30001377 | DIODE ZENER 33V UZT 33B | AB | AF |
| | D107 | 30025773 | DIODE ZENER SMD BZT55B5V5 | AA | AA |
| | D108 | 30003720 | DIODE ZENER BZT55C5V6 5.6V SMD | AA | AB |
| | D109 | 30003720 | DIODE ZENER BZT55C5V6 5.6V SMD | AA | AB |
| | D110 | 30009699 | DIODE ZENER BZT55C12 12V SMD | AA | AB |

| | REF No. | PARTS | DESCRIPTION | SN CODE | EX CODE |
|---|---|---|---|---|---|
| | D111 | 30009699 | DIODE ZENER BZT55C12 12V SMD | AA | AB |
| | D112 | 30003720 | DIODE ZENER BZT55C5V6 5.6V SMD | AA | AB |
| | D113 | 30009699 | DIODE ZENER BZT55C12 12V SMD | AA | AB |
| | D115 | 30009699 | DIODE ZENER BZT55C12 12V SMD | AA | AB |
| | D300 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D301 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D402 | 30012411 | DIODE BA782 SMD ROHS | AA | AD |
| | D405 | 30007763 | DIODE ZENER SMD BZT55C5V1 | AA | AB |
| | D407 | 30001284 | DIODE 1N4148 0.15A/100V 0.5A | AA | AB |
| | D408 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D409 | 30030809 | DIODE ZENER SMD BZT55B10V | AA | AA |
| | D410 | 30030809 | DIODE ZENER SMD BZT55B10V | AA | AA |
| | D411 | 30030809 | DIODE ZENER SMD BZT55B10V | AA | AA |
| | D501 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D505 | 30001284 | DIODE 1N4148 0.15A/100V 0.5A | AA | AB |
| | D506 | 30001284 | DIODE 1N4148 0.15A/100V 0.5A | AA | AB |
| | D509 | 30001279 | LED RED/GREEN LTL293SJ | AC | AH |
| | D512 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D513 | 30007761 | DIODE ZENER SMD BZT55C3V6 | AA | AB |
| | D602 | 30001329 | DIODE 1N4007 1A/1000V 30A | AA | AB |
| | D603 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D608 | 30001318 | DIODE BA159 1A/800V 20A | AA | AB |
| | D609 | 30001318 | DIODE BA159 1A/800V 20A | AA | AB |
| | D610 | 30001318 | DIODE BA159 1A/800V 20A | AA | AB |
| | D611 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D614 | 30001318 | DIODE BA159 1A/800V 20A | AA | AB |
| | D615 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D616 | 30009699 | DIODE ZENER BZT55C12 12V SMD | AA | AB |
| | D617 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D618 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D619 | 30009699 | DIODE ZENER BZT55C12 12V SMD | AA | AB |
| | D620 | 30001349 | DIODE ZENER 11V | AA | AB |
| | D621 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D622 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D623 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D700 | 30001285 | DIODE 1N4148 SMD | AA | AB |
| | D701 | 30001369 | DIODE ZENER 3.6V ZPD | AA | AB |
| | D800 | 30001318 | DIODE BA159 1A/800V 20A | AA | AB |
| | D801 | 30001347 | DIODE ZENER 8.2V. | AA | AB |
| | D802 | 30001318 | DIODE BA159 1A/800V 20A | AA | AB |
| | D803 | 30001315 | DIODE BYD33D 1A/200V 20A | AA | AE |
| | D804 | 30001318 | DIODE BA159 1A/800V 20A | AA | AB |
| | D805 | 30009366 | DIODE UF5402 3A/200V 150A | AB | AF |
| | D806 | 30001315 | DIODE BYD33D 1A/200V 20A | AA | AE |
| | D808 | 30007681 | DIODE UF5407 3A/800V 150A | AB | AF |
| | D809 | 30001329 | DIODE 1N4007 1A/1000V 30A | AA | AB |
| | D810 | 20128663 | HE.ASY.45-DIODE UF5402(U)(AK30A10) | AA | AE |
| | D811 | 30001329 | DIODE 1N4007 1A/1000V 30A | AA | AB |
| | D813 | 30001329 | DIODE 1N4007 1A/1000V 30A | AA | AB |
| | D837 | 30001329 | DIODE 1N4007 1A/1000V 30A | AA | AB |
| | D838 | 30001329 | DIODE 1N4007 1A/1000V 30A | AA | AB |
| | D889 | 30001384 | TR MCR22-6 | AB | AG |
| | D890 | 30001329 | DIODE 1N4007 1A/1000V 30A | AA | AB |
| | D891 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | D893 | 30001318 | DIODE BA159 1A/800V 20A | AA | AB |
| | D894 | 30001318 | DIODE BA159 1A/800V 20A | AA | AB |
| | D900 | 30001318 | DIODE BA159 1A/800V 20A | AA | AB |
| | D901 | 30001318 | DIODE BA159 1A/800V 20A | AA | AB |
| | D902 | 30001318 | DIODE BA159 1A/800V 20A | AA | AB |
| | D903 | 30001344 | DIODE ZENER 6.2V 1/2W | AA | AB |
| | D904 | 30001349 | DIODE ZENER 11V | AA | AB |
| | D905 | 30001349 | DIODE ZENER 11V | AA | AB |
| | D906 | 30001349 | DIODE ZENER 11V | AA | AB |
| | | | **PACKAGED CIRCUITS** | | |
| | X100 | 30002852 | XTAL REZ 455KHZ ROHS | AA | AD |
| | X401 | 30001749 | XTAL 4.433619 Series HC49U | AC | AK |
| | X402 | 30015592 | XTAL 3.579545 (WO/LOAD CAP) | AB | AG |
| | X403 | 30000074 | CAP MKT 100NF 63V J | AA | AC |
| | X501 | 30002851 | XTAL 4.000 30p HC49U | AC | AH |
| | X700 | 30001756 | XTAL 18.432 12p HC49U | AE | AP |
| | | | **COILS** | | |
| | L1001 | 30001996 | FIXED COIL 22UH Q40 K | AA | AB |
| | L1002 | 30001996 | FIXED COIL 22UH Q40 K | AA | AB |
| | L101 | 30013412 | FERRITE SMD 1.5K/100MHz 500 mA(0805) | AA | AA |

| | REF No. | PARTS | DESCRIPTION | SN CODE | EX CODE |
|---|---|---|---|---|---|
| | L110 | 30013412 | FERRITE SMD 1.5K/100MHz 500 mA(0805) | AA | AA |
| | L111 | 30013412 | FERRITE SMD 1.5K/100MHz 500 mA(0805) | AA | AA |
| | L112 | 30013412 | FERRITE SMD 1.5K/100MHz 500 mA(0805) | AA | AA |
| | L113 | 30013412 | FERRITE SMD 1.5K/100MHz 500 mA(0805) | AA | AA |
| | L114 | 30013412 | FERRITE SMD 1.5K/100MHz 500 mA(0805) | AA | AA |
| | L117 | 30001734 | JUMPER SMD (0805) | AA | AB |
| | L201 | 30001979 | FIXED COIL 1UH Q45 M-A | AA | AB |
| | L210 | 30001971 | FERRITE SMD 600R/100MHz 200mA (805) | AA | AD |
| | L211 | 30001971 | FERRITE SMD 600R/100MHz 200mA (805) | AA | AD |
| | L401 | 30001971 | FERRITE SMD 600R/100MHz 200mA (805) | AA | AD |
| | L402 | 30001992 | FIXED COIL 10UH Q65 K-A | AA | AB |
| | L403 | 30001971 | FERRITE SMD 600R/100MHz 200mA (805) | AA | AD |
| | L404 | 30001990 | FIXED COIL 6.8UH Q75 K | AA | AB |
| | L405 | 30026042 | ADJ.COIL VIF 44MHZ Q=64 C=39pF (AK36) | AA | AD |
| | L406 | 30001971 | FERRITE SMD 600R/100MHz 200mA (805) | AA | AD |
| | L407 | 30002002 | FIXED COIL 47UH Q60 K | AA | AB |
| | L603 | 30018501 | LINEARITY COIL 100UH | AB | AG |
| | L700 | 30001971 | FERRITE SMD 600R/100MHz 200mA (805) | AA | AD |
| | L701 | 30001971 | FERRITE SMD 600R/100MHz 200mA (805) | AA | AD |
| | L702 | 30001996 | FIXED COIL 22UH Q40 K | AA | AB |
| | L703 | 30001979 | FIXED COIL 1UH Q45 M-A | AA | AB |
| | L704 | 30001979 | FIXED COIL 1UH Q45 M-A | AA | AB |
| | L802 | 30001971 | FERRITE SMD 600R/100MHz 200mA (805) | AA | AD |
| | L803 | 30000607 | RES CF 1/4W 2.2R J. | AA | AB |
| | L805 | 30001971 | FERRITE SMD 600R/100MHz 200mA (805) | AA | AD |
| | L806 | 30001971 | FERRITE SMD 600R/100MHz 200mA (805) | AA | AD |
| | L807 | 30001992 | FIXED COIL 10UH Q65 K-A | AA | AB |
| | L808 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | L809 | 30001734 | JUMPER SMD (0805) | AA | AB |
| | L811 | 30001734 | JUMPER SMD (0805) | AA | AB |
| | | | **CERAMIC FILTERS** | | |
| | Z401 | 30012545 | FILTER SAW K9656M ROHS | AG | AR |
| | Z402 | 30014261 | FILTER SAW K3958M ROHS | AF | AR |
| | Z404 | 30001724 | FILTER SER TRAP TPS 5.5MHZ | AB | AF |
| | | | **TRANSFORMERS** | | |
| ⚠ | TR601 | 30017788 | TRF FBT SAFE 90ø (AK30,AK36 LAYER TYPE) | AT | BE |
| ⚠ | TR801 | 30002100 | LINE FILTER SAFE 2*27MH | AC | AH |
| ⚠ | TR802 | 30027707 | TRF SMPS SAFE AK44 RF 170-270V Audio=14V | AF | AQ |
| | | | **CAPACITORS** | | |
| | C100 | 30000352 | CAP EL 100UF 16V M | AA | AB |
| | C101 | 30012560 | CAP SMD 100PF 50V J (0603) | AA | AB |
| | C102 | 30012560 | CAP SMD 100PF 50V J (0603) | AA | AB |
| | C103 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C104 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C143 | 30012583 | CAP SMD 1.5NF 50V K (0603) | AA | AA |
| | C144 | 30012583 | CAP SMD 1.5NF 50V K (0603) | AA | AA |
| | C155 | 30012560 | CAP SMD 100PF 50V J (0603) | AA | AB |
| | C157 | 30012560 | CAP SMD 100PF 50V J (0603) | AA | AB |
| | C201 | 30000400 | CAP EL 47UF 50V M | AA | AB |
| | C202 | 30012985 | JUMPER SMD 0606 | AA | AB |
| | C205 | 30000371 | CAP EL 22UF 50V M | AA | AB |
| | C206 | 30012610 | CAP SMD 10NF 50V J (0603) | AA | AB |
| | C207 | 30012610 | CAP SMD 10NF 50V J (0603) | AA | AB |
| | C300 | 30000400 | CAP EL 47UF 50V M | AA | AB |
| | C302 | 30000092 | CAP MKT 220NF 63V J | AA | AD |
| | C305 | 30000092 | CAP MKT 220NF 63V J | AA | AD |
| | C404 | 30000225 | CAP CER 220PF 50V J SL ROHS | AA | AB |
| | C408 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C409 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C410 | 30000384 | CAP EL 2.2UF 50V M | AA | AB |
| | C411 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C412 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C413 | 30000362 | CAP EL 1UF 50V M. | AA | AB |
| | C414 | 30012585 | CAP SMD 2.2NF 50V K R (0603) | AA | AB |
| | C415 | 30012581 | CAP SMD 1NF 50V K R (0603) | AA | AB |
| | C416 | 30000362 | CAP EL 1UF 50V M. | AA | AB |
| | C417 | 30000362 | CAP EL 1UF 50V M. | AA | AB |
| | C418 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C419 | 30000413 | CAP EL 4.7UF 50V M | AA | AB |
| | C420 | 30000100 | CAP MKT 330NF 63V J | AA | AD |
| | C422 | 30000400 | CAP EL 47UF 50V M | AA | AB |
| | C423 | 30000400 | CAP EL 47UF 50V M | AA | AB |
| | C424 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C425 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |

| | REF No. | PARTS | DESCRIPTION | SN CODE | EX CODE |
|---|---|---|---|---|---|
| | C426 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C427 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C429 | 30012589 | CAP SMD 4.7NF 50V K (0603) | AA | AB |
| | C431 | 30000362 | CAP EL 1UF 50V M. | AA | AB |
| | C432 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C433 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C434 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C435 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C436 | 30000109 | CAP MKT 470NF 63V J | AA | AD |
| | C437 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C438 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C439 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C440 | 30000074 | CAP MKT 100NF 63V J | AA | AC |
| | C442 | 30000362 | CAP EL 1UF 50V M. | AA | AB |
| | C443 | 30000362 | CAP EL 1UF 50V M. | AA | AB |
| | C444 | 30000384 | CAP EL 2.2UF 50V M | AA | AB |
| | C446 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C448 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C449 | 30012567 | CAP SMD 220PF 50V J (0603) | AA | AB |
| | C451 | 30012585 | CAP SMD 2.2NF 50V K R (0603) | AA | AB |
| | C452 | 30012585 | CAP SMD 2.2NF 50V K R (0603) | AA | AB |
| | C453 | 30012581 | CAP SMD 1NF 50V K R (0603) | AA | AB |
| | C454 | 30012573 | CAP SMD 47PF 50V J (0603) | AA | AB |
| | C455 | 30012573 | CAP SMD 47PF 50V J (0603) | AA | AB |
| | C456 | 30012573 | CAP SMD 47PF 50V J (0603) | AA | AB |
| | C459 | 30012575 | CAP SMD 4.7PF 50V C CH (0603) | AA | AA |
| | C460 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C502 | 30000396 | CAP EL 47UF 16V M. | AA | AB |
| | C504 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C505 | 30012589 | CAP SMD 4.7NF 50V K (0603) | AA | AB |
| | C510 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C511 | 30012566 | CAP SMD 22PF 50V J (0603) | AA | AB |
| | C513 | 30000371 | CAP EL 22UF 50V M | AA | AB |
| | C514 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C515 | 30012579 | CAP SMD 82PF 50V J (0603) | AA | AB |
| | C517 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C518 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C519 | 30000352 | CAP EL 100UF 16V M | AA | AB |
| | C520 | 30012560 | CAP SMD 100PF 50V J (0603) | AA | AB |
| | C521 | 30012562 | CAP SMD 15PF 50V J (0603) | AA | AA |
| | C522 | 30012562 | CAP SMD 15PF 50V J (0603) | AA | AA |
| | C523 | 30012585 | CAP SMD 2.2NF 50V K R (0603) | AA | AB |
| | C524 | 30012985 | JUMPER SMD 0604 | AA | AB |
| | C525 | 30012566 | CAP SMD 22PF 50V J (0603) | AA | AB |
| | C530 | 30012589 | CAP SMD 4.7NF 50V K (0603) | AA | AB |
| | C531 | 30000384 | CAP EL 2.2UF 50V M | AA | AB |
| | C532 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C536 | 30000074 | CAP MKT 100NF 63V J | AA | AC |
| | C541 | 30000109 | CAP MKT 470NF 63V J | AA | AD |
| | C542 | 30000205 | CAP CER 150PF 50V J SL ROHS | AA | AB |
| | C543 | 30000205 | CAP CER 150PF 50V J SL ROHS | AA | AB |
| | C545 | 30012607 | CAP SMD 150PF 50V J (0603) | AA | AA |
| | C546 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C548 | 30012603 | CAP SMD 100NF 25V K R (0603) | AA | AB |
| | C603 | 30000384 | CAP EL 2.2UF 50V M | AA | AB |
| | C604 | 30000400 | CAP EL 47UF 50V M | AA | AB |
| | C608 | 30000107 | CAP MKT 47NF 250V J | AA | AD |
| | C610 | 30018901 | CAP EL 100UF 50V M 105° | AA | AB |
| | C611 | 30000092 | CAP MKT 220NF 63V J | AA | AD |
| | C613 | 30000078 | CAP MKT 1UF 100V M | AB | AF |
| | C615 | 30000359 | CAP EL 1000UF 16V M. | AA | AC |
| | C616 | 30000400 | CAP EL 47UF 50V M | AA | AB |
| ⚠ | C618 | 30007100 | CAP MKP SAFE 10NF 1600Vdc / 1250Vpp %3.5 | AA | AE |
| | C619 | 30000131 | CAP MKP SAFE 100NF 250V J | AA | AB |
| | C623 | 30029182 | CAP EL 100UF 250V M W LONG LEAD | AB | AF |
| | C624 | 30000350 | CAP EL 10UF 250V M. | AA | AD |
| ⚠ | C627 | 30006750 | CAP MKP 220NF 400V J | AA | AD |
| | C628 | 30018380 | CAP EL 3.3UF 160V M 105° | AA | AB |
| | C631 | 30000410 | CAP EL 470UF 50V M. | AB | AF |
| | C632 | 30000100 | CAP MKT 330NF 63V J | AA | AD |
| | C634 | 30000409 | CAP EL 470UF 25V M. | AA | AD |
| | C635 | 30000100 | CAP MKT 330NF 63V J | AA | AD |
| | C636 | 30000400 | CAP EL 47UF 50V M | AA | AB |
| | C638 | 30012581 | CAP SMD 1NF 50V K R (0603) | AA | AB |
| | C641 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C642 | 30012609 | CAP SMD 68NF 50V K (0603) | AA | AB |

| | REF No. | PARTS | DESCRIPTION | SN CODE | EX CODE |
|---|---|---|---|---|---|
| | C643 | 30000116 | CAP MKT 68NF 63V J | AA | AC |
| | C644 | 30000362 | CAP EL 1UF 50V M. | AA | AB |
| | C700 | 30012565 | CAP SMD 1.8PF 50V J CH (0603) | AA | AA |
| | C701 | 30012565 | CAP SMD 1.8PF 50V J CH (0603) | AA | AA |
| | C702 | 30012573 | CAP SMD 47PF 50V J (0603) | AA | AB |
| | C703 | 30012573 | CAP SMD 47PF 50V J (0603) | AA | AB |
| | C704 | 30012576 | CAP SMD 56PF 50V J CH (0603) | AA | AA |
| | C705 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C706 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C707 | 30012573 | CAP SMD 47PF 50V J (0603) | AA | AB |
| | C708 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C710 | 30012573 | CAP SMD 47PF 50V J (0603) | AA | AB |
| | C712 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C713 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C714 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C716 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C719 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C720 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C721 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C723 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C724 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C729 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C730 | 30000393 | CAP EL 3.3UF 50V M | AA | AB |
| | C733 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C734 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C735 | 30012586 | CAP SMD 22NF 50V K (0603) | AA | AB |
| | C736 | 30000345 | CAP EL 10UF 50V M | AA | AB |
| | C737 | 30000371 | CAP EL 22UF 50V M | AA | AB |
| | C738 | 30000371 | CAP EL 22UF 50V M | AA | AB |
| | C741 | 30012581 | CAP SMD 1NF 50V K R (0603) | AA | AB |
| | C742 | 30012581 | CAP SMD 1NF 50V K R (0603) | AA | AB |
| | C748 | 30012560 | CAP SMD 100PF 50V J (0603) | AA | AB |
| ⚠ | C801 | 30000094 | CAP MKT SAFE 220NF 275V M AC | AA | AB |
| ⚠ | C802 | 30000094 | CAP MKT SAFE 220NF 275V M AC | AA | AB |
| | C803 | 30000433 | CAP CER 1NF 1KV M B ROHS | AA | AB |
| | C805 | 30018085 | CAP VAR SAFE 510V K MFCN14D511 | AA | AD |
| | C806 | 30000433 | CAP CER 1NF 1KV M B ROHS | AA | AB |
| | C808 | 30000295 | CAP CER 100NF 50V Z F | AA | AB |
| | C809 | 30000420 | CAP EL 150UF 400V M. | AF | AQ |
| | C810 | 30000387 | CAP EL 33UF 50V M | AA | AB |
| ⚠ | C811 | 30000161 | CAP MKP SAFE 47NF 630Vdc / 622Vpp J | AB | AE |
| | C813 | 30000295 | CAP CER 100NF 50V Z F | AA | AB |
| ⚠ | C816 | 30000440 | CAP CER SAFE 2.2NF 4KV M ROHS | AA | AC |
| | C817 | 30000198 | CAP CER 120PF 500V J SL ROHS | AA | AB |
| | C818 | 30016654 | CAP SMD 100NF 16V K R (0603) | AA | AB |
| | C819 | 30012609 | CAP SMD 68NF 50V K (0603) | AA | AB |
| | C822 | 30007308 | CAP CER 220PF 1KV K (PULSE) ROHS | AA | AD |
| | C824 | 30009208 | CAP CER 470PF 1KV K (PULSE) ROHS | AA | AC |
| | C826 | 30029182 | CAP EL 100UF 250V M W LONG LEAD | AB | AF |
| | C827 | 30000411 | CAP EL 4700UF 16V M | AC | AH |
| | C828 | 30000295 | CAP CER 100NF 50V Z F | AA | AB |
| | C829 | 30000359 | CAP EL 1000UF 16V M. | AA | AC |
| | C830 | 30000382 | CAP EL 2200UF 16V M | AB | AF |
| | C832 | 30000295 | CAP CER 100NF 50V Z F | AA | AB |
| | C833 | 30000407 | CAP EL 470UF 16V M. | AA | AC |
| | C834 | 30000295 | CAP CER 100NF 50V Z F | AA | AB |
| | C836 | 30000431 | CAP CER 100PF 1KV M | AA | AC |
| | C838 | 30000352 | CAP EL 100UF 16V M | AA | AB |
| | C839 | 30000352 | CAP EL 100UF 16V M | AA | AB |
| | C840 | 30000352 | CAP EL 100UF 16V M | AA | AB |
| | C843 | 30000431 | CAP CER 100PF 1KV M | AA | AC |
| | C848 | 30000352 | CAP EL 100UF 16V M | AA | AB |
| | C849 | 30000352 | CAP EL 100UF 16V M | AA | AB |
| | C850 | 30000352 | CAP EL 100UF 16V M | AA | AB |
| | C855 | 30000407 | CAP EL 470UF 16V M. | AA | AC |
| | C857 | 30012573 | CAP SMD 47PF 50V J (0603) | AA | AB |
| | C859 | 30013533 | CAP CER 100PF 1KV K (PULSE) ROHS | AA | AC |
| | C862 | 30000367 | CAP EL 1UF 250V M | AA | AB |
| ⚠ | C864 | 30000440 | CAP CER SAFE 2.2NF 4KV M ROHS | AA | AC |
| | C907 | 30000434 | CAP CER 1NF 2KV K B ROHS | AA | AB |
| | C908 | 30000415 | CAP EL 4.7UF 250V M | AA | AC |
| | C912 | 30000075 | CAP MKT 100NF 250V K (DC) | AA | AD |
| | | | **RESISTORS** | | |
| | R100 | 30012510 | RES SMD 1/16W 100R J (0603) | AA | AB |
| | R1001 | 30000492 | RES CF 1/4W 120R J. | AA | AA |

| | REF No. | PARTS | DESCRIPTION | SN CODE | EX CODE |
|---|---|---|---|---|---|
| | R1002 | 30000492 | RES CF 1/4W 120R J. | AA | AA |
| | R101 | 30000489 | RES SMD 1/10W 1R J (0805) | AA | AB |
| | R103 | 30012509 | RES SMD 1/16W 100K J (0603) | AA | AB |
| | R105 | 30000792 | RES CF 1/4W 75R J | AA | AB |
| | R109 | 30012713 | RES SMD 1/16W 75R J (0603) | AA | AB |
| | R110 | 30012713 | RES SMD 1/16W 75R J (0603) | AA | AB |
| | R113 | 30012713 | RES SMD 1/16W 75R J (0603) | AA | AB |
| | R114 | 30012713 | RES SMD 1/16W 75R J (0603) | AA | AB |
| | R115 | 30012713 | RES SMD 1/16W 75R J (0603) | AA | AB |
| | R116 | 30012713 | RES SMD 1/16W 75R J (0603) | AA | AB |
| | R117 | 30012713 | RES SMD 1/16W 75R J (0603) | AA | AB |
| | R118 | 30012713 | RES SMD 1/16W 75R J (0603) | AA | AB |
| | R123 | 30012713 | RES SMD 1/16W 75R J (0603) | AA | AB |
| | R127 | 30000459 | RES CF 1/4W 100R J. | AA | AB |
| | R129 | 30012713 | RES SMD 1/16W 75R J (0603) | AA | AB |
| | R135 | 30012657 | RES SMD 1/16W 1K J (0603) | AA | AB |
| | R153 | 30012657 | RES SMD 1/16W 1K J (0603) | AA | AB |
| | R201 | 30012674 | RES SMD 1/16W 27K J (0603) | AA | AB |
| | R202 | 30012692 | RES SMD 1/16W 4.7K J (0603) | AA | AB |
| | R204 | 30000459 | RES CF 1/4W 100R J. | AA | AB |
| | R206 | 30000459 | RES CF 1/4W 100R J. | AA | AB |
| | R301 | 30000471 | RES CF 1/4W 10K J. | AA | AB |
| | R302 | 30000471 | RES CF 1/4W 10K J. | AA | AB |
| | R303 | 30012641 | RES SMD 1/16W 10K J (0603) | AA | AB |
| | R305 | 30012641 | RES SMD 1/16W 10K J (0603) | AA | AB |
| | R306 | 30012509 | RES SMD 1/16W 100K J (0603) | AA | AB |
| | R407 | 30000590 | RES CF 1/4W 2.2K J. | AA | AB |
| | R410 | 30000590 | RES CF 1/4W 2.2K J. | AA | AB |
| | R412 | 30012696 | RES SMD 1/16W 47K J (0603) | AA | AB |
| | R417 | 30012510 | RES SMD 1/16W 100R J (0603) | AA | AB |
| | R418 | 30012510 | RES SMD 1/16W 100R J (0603) | AA | AB |
| | R419 | 30012649 | RES SMD 1/16W 150R J (0603) | AA | AB |
| | R420 | 30000466 | RES CF 1/4W 1K J. | AA | AB |
| | R421 | 30012650 | RES SMD 1/16W 15K J (0603) | AA | AB |
| | R422 | 30012659 | RES SMD 1/16W 2.2K J (0603) | AA | AB |
| | R423 | 30012712 | RES SMD 1/16W 8.2K J (0603) | AA | AB |
| | R424 | 30000712 | RES CF 1/4W 470R J | AA | AB |
| | R425 | 30012668 | RES SMD 1/16W 220R J (0603) | AA | AA |
| | R426 | 30012659 | RES SMD 1/16W 2.2K J (0603) | AA | AB |
| | R427 | 30012674 | RES SMD 1/16W 27K J (0603) | AA | AB |
| | R428 | 30000792 | RES CF 1/4W 75R J | AA | AB |
| | R431 | 30012674 | RES SMD 1/16W 27K J (0603) | AA | AB |
| | R432 | 30012657 | RES SMD 1/16W 1K J (0603) | AA | AB |
| | R433 | 30012667 | RES SMD 1/16W 220K J (0603) | AA | AB |
| | R437 | 30000466 | RES CF 1/4W 1K J. | AA | AB |
| | R438 | 30000466 | RES CF 1/4W 1K J. | AA | AB |
| | R439 | 30012657 | RES SMD 1/16W 1K J (0603) | AA | AB |
| | R440 | 30012714 | RES SMD 1/16W 820R J (0603) | AA | AA |
| | R441 | 30012656 | RES SMD 1/16W 18K J (0603) | AA | AB |
| | R442 | 30000466 | RES CF 1/4W 1K J. | AA | AB |
| | R446 | 30012714 | RES SMD 1/16W 820R J (0603) | AA | AA |
| | R447 | 30012714 | RES SMD 1/16W 820R J (0603) | AA | AA |
| | R448 | 30012683 | RES SMD 1/16W 330K J (0603) | AA | AB |
| | R449 | 30012662 | RES SMD 1/16W 2.7K J (0603) | AA | AB |
| | R450 | 30000712 | RES CF 1/4W 470R J | AA | AB |
| | R455 | 30012665 | RES SMD 1/16W 20K J (0603) | AA | AB |
| | R458 | 30012662 | RES SMD 1/16W 2.7K J (0603) | AA | AB |
| | R459 | 30012510 | RES SMD 1/16W 100R J (0603) | AA | AB |
| | R460 | 30012510 | RES SMD 1/16W 100R J (0603) | AA | AB |
| | R461 | 30012510 | RES SMD 1/16W 100R J (0603) | AA | AB |
| | R463 | 30012692 | RES SMD 1/16W 4.7K J (0603) | AA | AB |
| | R464 | 30012665 | RES SMD 1/16W 20K J (0603) | AA | AB |
| | R465 | 30012692 | RES SMD 1/16W 4.7K J (0603) | AA | AB |
| | R467 | 30012641 | RES SMD 1/16W 10K J (0603) | AA | AB |
| | R468 | 30012641 | RES SMD 1/16W 10K J (0603) | AA | AB |
| | R469 | 30000670 | RES CF 1/4W 330K J. | AA | AB |
| | R470 | 30012683 | RES SMD 1/16W 330K J (0603) | AA | AB |
| | R474 | 30012692 | RES SMD 1/16W 4.7K J (0603) | AA | AB |
| | R475 | 30012510 | RES SMD 1/16W 100R J (0603) | AA | AB |
| | R476 | 30012707 | RES SMD 1/16W 680R J (0603) | AA | AB |
| | R477 | 30014022 | RES SMD 1/16W 47R J (0603) | AA | AA |
| | R502 | 30012695 | RES SMD 1/16W 470R J (0603) | AA | AB |
| | R503 | 30012707 | RES SMD 1/16W 680R J (0603) | AA | AB |
| | R504 | 30012679 | RES SMD 1/16W 3.9K J (0603) | AA | AB |
| | R505 | 30012673 | RES SMD 1/16W 270R J (0603) | AA | AB |
| | R506 | 30012506 | RES SMD 1/16W 1.5K J (0603) | AA | AB |

| | REF No. | PARTS | DESCRIPTION | SN CODE | EX CODE |
|---|---|---|---|---|---|
| | R507 | 30000466 | RES CF 1/4W 1K J. | AA | AB |
| | R508 | 30000622 | RES CF 1/4W 270R J | AA | AB |
| | R509 | 30012641 | RES SMD 1/16W 10K J (0603) | AA | AB |
| | R510 | 30000737 | RES CF 1/4W 5.1K J | AA | AB |
| | R511 | 30012657 | RES SMD 1/16W 1K J (0603) | AA | AB |
| | R512 | 30012504 | RES SMD 1/16W 1.2K J (0603) | AA | AB |
| | R513 | 30000459 | RES CF 1/4W 100R J. | AA | AB |
| | R514 | 30000459 | RES CF 1/4W 100R J. | AA | AB |
| | R515 | 30012692 | RES SMD 1/16W 4.7K J (0603) | AA | AB |
| | R516 | 30012692 | RES SMD 1/16W 4.7K J (0603) | AA | AB |
| | R517 | 30012692 | RES SMD 1/16W 4.7K J (0603) | AA | AB |
| | R518 | 30000471 | RES CF 1/4W 10K J. | AA | AB |
| | R519 | 30012698 | RES SMD 1/16W 5.6K J (0603) | AA | AB |
| | R525 | 30000583 | RES CF 1/4W 220R | AA | AB |
| | R526 | 30012641 | RES SMD 1/16W 10K J (0603) | AA | AB |
| | R527 | 30000718 | RES CF 1/4W 4.7K J. | AA | AB |
| | R528 | 30012698 | RES SMD 1/16W 5.6K J (0603) | AA | AB |
| | R530 | 30012698 | RES SMD 1/16W 5.6K J (0603) | AA | AB |
| | R532 | 30012659 | RES SMD 1/16W 2.2K J (0603) | AA | AB |
| | R533 | 30012644 | RES SMD 1/16W 12K J (0603) | AA | AB |
| | R534 | 30000526 | RES CF 1/4W 1.5K J | AA | AB |
| | R535 | 30000718 | RES CF 1/4W 4.7K J. | AA | AB |
| | R536 | 30000471 | RES CF 1/4W 10K J. | AA | AB |
| | R537 | 30012641 | RES SMD 1/16W 10K J (0603) | AA | AB |
| | R545 | 30012644 | RES SMD 1/16W 12K J (0603) | AA | AB |
| | R546 | 30000560 | RES CF 1/4W 1.8K J | AA | AB |
| | R547 | 30012659 | RES SMD 1/16W 2.2K J (0603) | AA | AB |
| | R548 | 30012641 | RES SMD 1/16W 10K J (0603) | AA | AB |
| | R552 | 30012692 | RES SMD 1/16W 4.7K J (0603) | AA | AB |
| | R555 | 30012659 | RES SMD 1/16W 2.2K J (0603) | AA | AB |
| | R556 | 30012657 | RES SMD 1/16W 1K J (0603) | AA | AB |
| | R559 | 30000470 | RES CF 1/2W 10K J | AA | AA |
| | R560 | 30012669 | RES SMD 1/16W 22K J (0603) | AA | AB |
| | R561 | 30012692 | RES SMD 1/16W 4.7K J (0603) | AA | AB |
| | R562 | 30000471 | RES CF 1/4W 10K J. | AA | AB |
| | R564 | 30012641 | RES SMD 1/16W 10K J (0603) | AA | AB |
| | R565 | 30012641 | RES SMD 1/16W 10K J (0603) | AA | AB |
| | R601 | 30000752 | RES CF 1/4W 56K J | AA | AB |
| | R602 | 30000477 | RES CF 1/4W 100K J. | AA | AB |
| | R605 | 30000805 | RES CF 1/4W 75K J | AA | AB |
| | R612 | 30012692 | RES SMD 1/16W 4.7K J (0603) | AA | AB |
| | R613 | 30012692 | RES SMD 1/16W 4.7K J (0603) | AA | AB |
| | R618 | 30012508 | RES SMD 1/16W 1.8K J (0603) | AA | AB |
| | R619 | 30012705 | RES SMD 1/16W 6.8K J (0603) | AA | AB |
| | R623 | 30000607 | RES CF 1/4W 2.2R J. | AA | AB |
| | R624 | 30001120 | RES MO 2W 22R J | AA | AB |
| | R625 | 30000900 | RES MF 1/4W 1.8K J | AA | AB |
| | R627 | 30015173 | RES MF 1/2W 2.7R F | AA | AA |
| | R628 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | R630 | 30000828 | RES CF 1/4W 8.2M J | AA | AB |
| | R631 | 30000885 | RES MF 1/4W 1.5K J | AA | AB |
| | R633 | 30000650 | RES CF 1/4W 33R J. | AA | AB |
| | R634 | 30012641 | RES SMD 1/16W 10K J (0603) | AA | AB |
| | R637 | 30000621 | RES CF 1/2W 270R J | AA | AB |
| | R638 | 30000589 | RES CF 1/2W 2.2K J | AA | AA |
| | R639 | 30000718 | RES CF 1/4W 4.7K J. | AA | AB |
| | R640 | 30012662 | RES SMD 1/16W 2.7K J (0603) | AA | AB |
| | R641 | 30012649 | RES SMD 1/16W 150R J (0603) | AA | AB |
| | R645 | 30018904 | RES MO 5W 4.7K J (RADIAL) | AA | AD |
| | R646 | 30014941 | RES CF 1/4W 16K J | AA | AA |
| | R647 | 30000466 | RES CF 1/4W 1K J. | AA | AB |
| ⚠ | R648 | 30014475 | RES FUSE SAFE 1W 3.9R J | AA | AB |
| | R649 | 30014941 | RES CF 1/4W 16K J | AA | AA |
| | R650 | 30000744 | RES CF 1/4W 560R J | AA | AB |
| | R654 | 30000458 | RES CF 1/2W 100R J | AA | AB |
| | R655 | 30000705 | RES CF 1/2W 47R J. | AA | AB |
| | R657 | 30012656 | RES SMD 1/16W 18K J (0603) | AA | AB |
| | R659 | 30001150 | RES MO 2W 330R J | AA | AB |
| | R660 | 30012669 | RES SMD 1/16W 22K J (0603) | AA | AB |
| | R661 | 30012674 | RES SMD 1/16W 27K J (0603) | AA | AB |
| | R662 | 30000712 | RES CF 1/4W 470R J | AA | AB |
| | R663 | 30000459 | RES CF 1/4W 100R J. | AA | AB |
| | R664 | 30007779 | RES MO 5W 47R J(RADIAL) | AA | AC |
| | R665 | 30012708 | RES SMD 1/16W 68K J (0603) | AA | AA |
| | R666 | 30001077 | RES MO 2W 10R J | AA | AC |
| | R667 | 30012659 | RES SMD 1/16W 2.2K J (0603) | AA | AB |

| | REF No. | PARTS | DESCRIPTION | SN CODE | EX CODE |
|---|---|---|---|---|---|
| | R668 | 30012641 | RES SMD 1/16W 10K J (0603) | AA | AB |
| | R669 | 30012659 | RES SMD 1/16W 2.2K J (0603) | AA | AB |
| | R701 | 30000459 | RES CF 1/4W 100R J. | AA | AB |
| | R703 | 30000459 | RES CF 1/4W 100R J. | AA | AB |
| | R705 | 30000459 | RES CF 1/4W 100R J. | AA | AB |
| | R715 | 30012695 | RES SMD 1/16W 470R J (0603) | AA | AB |
| | R717 | 30012695 | RES SMD 1/16W 470R J (0603) | AA | AB |
| | R719 | 30012657 | RES SMD 1/16W 1K J (0603) | AA | AB |
| | R721 | 30012510 | RES SMD 1/16W 100R J (0603) | AA | AB |
| | R722 | 30012510 | RES SMD 1/16W 100R J (0603) | AA | AB |
| | R725 | 30012657 | RES SMD 1/16W 1K J (0603) | AA | AB |
| | R726 | 30012657 | RES SMD 1/16W 1K J (0603) | AA | AB |
| | R727 | 30012657 | RES SMD 1/16W 1K J (0603) | AA | AB |
| | R730 | 30012657 | RES SMD 1/16W 1K J (0603) | AA | AB |
| | R731 | 30012657 | RES SMD 1/16W 1K J (0603) | AA | AB |
| | R801 | 30000982 | RES MF 1/4W 4.7K J | AA | AA |
| | R803 | 30012659 | RES SMD 1/16W 2.2K J (0603) | AA | AB |
| | R804 | 30000504 | RES CF 1/4W 120K J | AA | AB |
| | R805 | 30000843 | RES MF 1/4W 10R J | AA | AB |
| | R806 | 30000982 | RES MF 1/4W 4.7K J | AA | AA |
| | R807 | 30001159 | RES MO 1W 0.33R J | AA | AB |
| | R809 | 30007784 | RES MO 5W 33K J(RADIAL) | AA | AD |
| ⚠ | R810 | 30001257 | RES MG SAFE 1/2W 4.7M J ROHS | AA | AD |
| | R811 | 30000594 | RES CF 1/4W 22K J. | AA | AB |
| | R813 | 30000718 | RES CF 1/4W 4.7K J. | AA | AB |
| | R814 | 30000588 | RES SMD 1/10W 220R J 0805 | AA | AB |
| | R815 | 30000452 | RES CF 1/4W 10R J. | AA | AB |
| | R817 | 30001037 | RES MF 1/4W 99K F | AA | AB |
| | R818 | 30006463 | RES MF 1/4W 2K F | AA | AA |
| | R819 | 30000809 | RES CF 1/2W 820R J | AA | AA |
| | R821 | 30000470 | RES CF 1/2W 10K J | AA | AA |
| | R828 | 30001265 | NTC SAFE MONITOR 10R/3A SCK-103 | AA | AB |
| | R829 | 30000718 | RES CF 1/4W 4.7K J. | AA | AB |
| | R830 | 30012657 | RES SMD 1/16W 1K J (0603) | AA | AB |
| | R831 | 30012669 | RES SMD 1/16W 22K J (0603) | AA | AB |
| | R833 | 30012985 | JUMPER SMD 0607 | AA | AB |
| | R835 | 20153236 | CN.ASY.44-RES WW 5W 5.6R J RAD+35006011 | AB | AF |
| ⚠ | R836 | 30001224 | RES FUSE SAFE 1/2W 0.22R J | AA | AB |
| | R838 | 30000631 | RES SMD 1/10W 2.7K J 0805 | AA | AB |
| | R900 | 30006712 | FERRITE BEAD 3.5X4.7X0.8 | AA | AB |
| | R901 | 30006712 | FERRITE BEAD 3.5X4.7X0.9 | AA | AB |
| | R902 | 30006712 | FERRITE BEAD 3.5X4.7X0.10 | AA | AB |
| | R903 | 30000885 | RES MF 1/4W 1.5K J | AA | AB |
| | R904 | 30000885 | RES MF 1/4W 1.5K J | AA | AB |
| | R905 | 30000885 | RES MF 1/4W 1.5K J | AA | AB |
| | R906 | 30000525 | RES CF 1/2W 1.5K J | AA | AB |
| | R919 | 30001212 | RES FUSE SAFE 1/2W 1R J | AA | AA |
| | | | **MISCELLANEOUS PARTS** | | |
| ⚠ | F801 | 30001731 | FUSE SAFE 2.5A 250V 5*20MM | AA | AC |
| | J100 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J1000 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J101 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J102 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J103 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J104 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J105 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J106 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J108 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J109 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J110 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J111 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J112 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J113 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J115 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J116 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J117 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J118 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J119 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J120 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J121 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J122 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J123 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J124 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J125 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J126 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |

| | REF No. | PARTS | DESCRIPTION | SN CODE | EX CODE |
|---|---|---|---|---|---|
| | J127 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J128 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J129 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J130 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J131 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J132 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J133 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J134 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J135 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J136 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J137 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J138 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J139 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J140 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J141 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J142 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J143 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J144 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J145 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J146 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J147 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J148 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J149 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J150 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J209 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J210 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | J300 | 30012985 | JUMPER SMD 0613 | AA | AB |
| | J301 | 30012985 | JUMPER SMD 0608 | AA | AB |
| | J302 | 30012985 | JUMPER SMD 0609 | AA | AB |
| | J303 | 30012985 | JUMPER SMD 0610 | AA | AB |
| | J304 | 30012985 | JUMPER SMD 0611 | AA | AB |
| | J305 | 30012985 | JUMPER SMD 0612 | AA | AB |
| | J306 | 30001734 | JUMPER SMD (0805) | AA | AB |
| | J307 | 30012985 | JUMPER SMD 0615 | AA | AB |
| | J308 | 30012985 | JUMPER SMD 0614 | AA | AB |
| | J312 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | JK1 | 30027655 | JACK RCA 1P WHITE SHARP (AK44) ROHS | AA | AC |
| | JK100 | 30001900 | JACK HEADPHONE HP01/2/3/4/5/6 | AD | AM |
| | JK100 | 30027656 | JACK RCA 1P RED SHARP (AK44) ROHS | AA | AC |
| | JK2 | 30027654 | JACK RCA 1P YELLOW SHARP (AK44) ROHS | AA | AC |
| | NOT1 | 30009849 | CABL 1P/70 SIS | AA | AB |
| | PL100 | 30000283 | CAP CER 1NF 50V K B ROHS | AA | AB |
| | PL100 | 30001829 | CONN HEADER 2P 2.5MM TOP WHT SD | AA | AB |
| | PL100 | 30017953 | CONN MALE 5P SIDE WHITE | AA | AA |
| | PL100 | 30018405 | CNAS 2P/250 SHL W/DC UL1533AWG24 | AB | AF |
| | PL100 | 30018454 | CONN HEADER 2P 2.5MM TOP BLACK | AA | AA |
| | PL100 | 30027418 | CONN HEADER 2P 2.5MM SIDE YELLOW SD ROHS | AA | AA |
| | PL100 | 30027658 | CNAS 2P+3P/300 W/C BLK&WHT UL1007AWG24 | AB | AF |
| | PL101 | 30015053 | SOCKET SCART NEW TYPE | AB | AF |
| | PL105 | 30001830 | CONN HEADER 2P 2.5MM TOP BLUE SD | AA | AB |
| | PL107 | 30001835 | CONN HEADER 3P 2.5MM TOP WHT SD | AA | AB |
| | PL109 | 30015192 | CONN HEADER 2P 2.5MM TOP YELLOW SD | AA | AA |
| | PL110 | 30001830 | CONN HEADER 2P 2.5MM TOP BLUE SD | AA | AB |
| | PL110 | 30027659 | CNAS 2P/150 W/DC SHL BLUE ROHS | AC | AH |
| | PL115 | 30001835 | CONN HEADER 3P 2.5MM TOP WHT SD | AA | AB |
| | PL115 | 30002251 | CNAS 3P/280 SHL W/DC UL2547AWG24 | AB | AF |
| | PL301 | 30001829 | CONN HEADER 2P 2.5MM TOP WHT SD | AA | AB |
| | PL302 | 30018454 | CONN HEADER 2P 2.5MM TOP BLACK | AA | AA |
| | PL405 | 30006709 | CONN HEADER 5P 2.5MM TOP WHT SD | AA | AB |
| | PL407 | 30001836 | CONN HEADER 3P 2.5MM TOP BLACK SD | AA | AB |
| | PL501 | 30001783 | CONN HEADER 5P 2.5MM TOP BD | AA | AC |
| | PL503 | 30009085 | CNAS 1P/350 DIS W/CLIPS | AA | AC |
| | PL504 | 30019101 | CABL 1P/350 DIS UL1672AWG22 | AA | AB |
| | PL601 | 30001827 | CONN HEADER 4P 5/7.5MM TOP WHT | AA | AD |
| | PL602 | 30006660 | CONN HEADER 4P 2.5MM TOP WHT SD | AA | AB |
| | PL801 | 30001792 | CONN HEADER 2P 7.5MM TOP WHT SAFE | AA | AC |
| | PL802 | 30001795 | CONN HEADER 3P 5/7.5MM TOP WHT | AA | AC |
| | PL900 | 30016695 | CNAS 5P/450 FLT W/C+CBLH UL2468AWG24 | AB | AE |
| | PL902 | 30016694 | CNAS 4P/450 FLT W/C+ BLH UL2468AWG24 | AA | AE |
| ⚠ | PL903 | 30001855 | SOCKET CRT SAFE NARROWNECK W/GND | AD | AM |
| | S105 | 30012985 | JUMPER SMD 0616 | AA | AB |
| | S106 | 30012985 | JUMPER SMD 0617 | AA | AB |
| | S107 | 30012985 | JUMPER SMD 0618 | AA | AB |
| | S405 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | S410 | 30012985 | JUMPER SMD 0605 | AA | AB |
| | S412 | 30012985 | JUMPER SMD 0603 | AA | AB |

| | REF No. | PARTS | DESCRIPTION | SN CODE | EX CODE |
|---|---|---|---|---|---|
| | S900 | 30002583 | JUMPER 0.6MM ROHS | AA | AB |
| | SG900 | 30000428 | SPARK GAP 300V | AB | AG |
| | SG901 | 30000428 | SPARK GAP 300V | AB | AG |
| | SG902 | 30000428 | SPARK GAP 300V | AB | AG |
| | SW506 | 30016022 | SWITCH TACT VERTICAL T&R ROHS | AA | AB |
| | SW507 | 30016022 | SWITCH TACT VERTICAL T&R ROHS | AA | AB |
| | SW508 | 30016022 | SWITCH TACT VERTICAL T&R ROHS | AA | AB |
| | SW509 | 30016022 | SWITCH TACT VERTICAL T&R ROHS | AA | AB |
| | SW510 | 30016022 | SWITCH TACT VERTICAL T&R ROHS | AA | AB |
| ⚠ | SW801 | 30017848 | SWITCH SAFE ON/OFF 4A/128A JVC(PANASONI) | AC | AH |
| ⚠ | TH800 | 30001268 | THERMISTOR SAFE 3P | AD | AM |
| | | 20013018 | LBL.BCK.CVR.ASSY (TV) (WO/UL) | AA | AB |
| ⚠ | | 20069673 | FIRE BARRIER (I)(NATURAL-V.0) (AK30) | AA | AC |
| ⚠ | | 20140383 | BACK CVR.2163RF EKO2GRAY (AK44) | AQ | BA |
| | | 20141200 | SNOW BOX ASSY 2163 | AN | AZ |
| | | 20141421 | CRT B.ASSY.TP44-RF/SF (AK44) | AQ | BA |
| | | 20143026 | R/C 1548 SHARP (EKO2GRAY/I) (GRAY/S) | AM | AY |
| | | 20146661 | MD.ASY.HP44-STEREO (HP+FAV) (AK44) | AE | AP |
| | | 20146997 | CONTROL PAN.DOOR 2163RF SHARP SLV285S(P) | AD | AM |
| | | 20151168 | SPK.AS.2163 SHARP (R) (AK44) | AM | AX |
| | | 20151169 | SPK.AS.2163 SHARP (L) (AK44) | AM | AX |
| | | 20151304 | POWER CORD ASSY.(2.2MT W/FTZ)(LONGWELL) | AD | AM |
| | | 20161431 | FRONT2163AV3H W/H&J SLV285S/P/PW/S/2S/Mi | AT | BD |
| | | 20188958 | CHS.ASSY.44-512D315132231H | BG | BZ |
| | | 20188959 | LBL.BCK.CVR.SHARP 21LF90RU"AK44" | AA | AC |
| | | 20188960 | LBL.CART.BOX SHARP 21LF90RU AK44(SILV) | AA | AC |
| | | 30016802 | RES WW 5W 5.6R J RAD | AA | AD |
| | | 30027134 | SPEAKER 16R 4W F/R 50x120MM-21" SHARP | AF | AR |
| | | 30027688 | CNAS 2P/500 90° SPK DIS W/C+FER AWG24 | AB | AE |
| | | 30027691 | CNAS 2P/690 90° DIS W/BLK C+FER AWG24 | AB | AE |
| ⚠ | | 30028208 | POWER CORD SAFE EURO 2.2M SHARP W/F ROHS | AG | AT |
| | | 35000013 | SPRING ON/OFF SWITCH | AA | AB |
| | | 35000180 | SCREW C ZN YSMB M3*6 | AA | AA |
| | | 35000181 | SCREW C ZN YSMB M3*8 | AA | AB |
| | | 35000182 | SCREW C ZN YSMB M3*10 | AA | AA |
| | | 35005084 | SCREW C ZN RYAKB 6x30 | AA | AB |
| | | 35005418 | SCREW P C ZN YSB 3.5x10 (KN1031 T35X10) | AA | AA |
| | | 35008081 | SCREW P C ZN YFMB 3*9.5 | AA | AA |
| | | 35008812 | SCREW P C ZN RYSB 3x10 | AA | AB |
| | | 35008844 | DOOR METAL SPRING (41x22.5) SHARP | AA | AC |
| | | 35009300 | SCREW P C ZN FYSB 4X16 (D:11) | AA | AB |
| | | 35010702 | SCREW P C ZN YSB SK 4x18.5 (BEYAZ) | AA | AA |
| | | 40012331 | RUBBER PAD (RC 1542) | AD | AL |
| | | 40016817 | LOGO SHARP (D.C.-SILVER)21"RF | AC | AH |
| | | 40016859 | RUBBER WASHER 2163RF (I) SHARP | AA | AB |
| | | 40016871 | DOOR SPACER (M10) | AA | AB |
| | | 50043894 | CONTROL STICKER STREO 2163RF SHARP | AD | AN |
| | | 50048335 | CARTON BOX SHARP SHARP (2163) | AL | AX |
| | | 50060540 | I/B SHARP 21LF90RU P/AK44/1548/E/RU | AC | AK |

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